

REMARKS

This communication responds to the Final Office Action mailed on April 3, 2009. Claims 1, 4-6, 9, 12, 16-17, and 40 are amended, no claims are canceled, and no claims are added in this communication. As a result, claims 1, 4-12, 14-17, and 40-43 are now pending in this Application. Claims 6-11 are presently withdrawn from consideration. It is respectfully noted that claims 4-5 and 16-17 have been amended, as well as other claims, to clarify that a "component lead" is recited, to prevent confusion with the chemical "lead" (Pb), and not for reasons related to patentability.

Examiner's Interview

The undersigned wishes to express his appreciation to Examiner Long Pham for extending the courtesy of an Examiner's Interview via telephone on May 8, 2009. During the interview, the elements of claim 1 were discussed. More particularly, the discussion included the claimed ranges of composition in the claim elements, and obviousness concerns. No definitive agreement was reached as to amendments that could be used overcome the cited art. Examiner Pham graciously agreed to consider additional amendments to the claims, and further argument with respect to the issue of obviousness.

§ 103 Rejection of the Claims

Claims 1 and 4-5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Master et al. (US pub 20030037959; hereinafter "Master") in combination with the applicant's admitted prior art (AAPA) of this application. Claims 12 and 14-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Master in combination with the AAPA. Claims 40-43 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the AAPA in combination with Master. These rejections are respectfully traversed in light of the amendments to each of the independent claims.

1) *The Applicable Law*

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d (BNA) 1596, 1598 (Fed. Cir. 1988). As discussed in *KSR International Co. v. Teleflex Inc. et al.* (U.S. 2007), the determination of obviousness under 35 U.S.C. § 103 is a legal conclusion based on factual evidence. *See Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.*, 7, 1336-37 (Fed. Cir. 2005). The legal conclusion, that a claim is obvious within § 103(a), depends on at least four underlying factual issues set forth in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966): (1) the scope and content of the prior art; (2) differences between the prior art and the claims at issue; (3) the level of ordinary skill in the pertinent art; and (4) evaluation of any relevant secondary considerations.

The *KSR* Court further held that “rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” (*See In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006) cited with approval in *KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 1740-41 (2007)).

Therefore, the Examiner must, as one of the inquiries pertinent to any obviousness inquiry under 35 U.S.C. §103, recognize and consider not only the similarities but also the critical differences between the claimed invention and the prior art. (*In re Bond*, 910 F.2d 831,834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990), *reh'g denied*, 1990 U.S. App. LEXIS 19971 (Fed. Cir.1990).) Critical differences in the prior art must be recognized (when attempting to combine references). (*In re Bond*, 910 F.2d 831,834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990), *reh'g denied*, 1990 U.S. App. LEXIS 19971 (Fed. Cir.1990).)

Moreover, the fact that a reference teaches away from a claimed invention is highly probative that the reference would not have rendered the claimed invention obvious to one of ordinary skill in the art. (*Stranco Inc. v. Atlantes Chemical Systems, Inc.*, 15 USPQ2d 1704, 1713 (Tex. 1990).) When the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious. (*Id.* at 4 citing *United States v. Adams*, 383 U.S. 39, 51-51 (1966).)

"If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." (*In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). The CCPA has also noted that "[t]he court must be ever alert not to read obviousness into an invention on the basis of the applicant's own statements; that is, we must view the prior art without reading into that art appellant's teachings." *In re Spinnoble*, 160 USPQ 237, 243 (CCPA 1969). These principles have not been changed by the ruling in *KSR*.

2) *Application of § 103 to Rejected Claims – Master Teaches Away from the Modification Suggested by the Office*

The Applicant has amended independent claims 1, 12, and 40 to recite a lead finish or a composition comprising "from about 78% to less than 80% by weight of lead, between about 9% and about 11% by weight of antimony, greater than 5% up to about 12% by weight of silver, and a balance of tin". The Office states that Master et al. teaches "a lead finish comprising about 80-85 percent by weight of lead, about 1-5 percent by weight of silver, about 6-12 percent by weight of antimony, and a balance of tin." Thus, there is no *prima facie* case of obviousness, since all of the claimed ranges do not "overlap or lie inside ranges disclosed by the prior art". See *In re Wertheim*, 541 F.2nd 257 (CCPA 1976).

In addition, while it was not mentioned in the Office Action, it is noted that the Examiner expressed concern during the Examiner's Interview on May 8, 2009 about whether it might be obvious to modify the ranges in the cited art to match those that are claimed. In reply, the Office is asked to consider the following.

First, it is respectfully noted that the prior assertion by the Office is not quite correct. Master actually teaches the use of at least 3% tin, and not "a balance of tin". Thus, Master teaches away from compositions that use less than 3% tin, and it is respectfully submitted that one of ordinary skill in the art would not be motivated to prepare the composition claimed by the Applicant when exposed to the teaching of Master and/or the AAPA because the range of silver claimed by the Applicant permits the use of compositions that have no tin. That is, Master states that a "low weight percent (wt. %) of tin (Sn)" is advantageous, and goes on to explicitly teach the use of at least 3% tin in every example given by the reference. See Master, paragraphs

[0017], [0035], [0041] – [0042], [0045], and Master's claims. Thus, it would not be obvious to one of ordinary skill in the art to try the range of silver claimed by the Applicant because such would not always include the use of at least 3% tin, as taught by Master.

Second, it is respectfully submitted that one of ordinary skill in the art would not be motivated to prepare the composition claimed by the Applicant when exposed to the teaching of Master and/or the AAPA because Master only suggests using less than 80% lead when silver is not used, and when accompanied by the use of bismuth (e.g., lead from 64 wt. % to 85 wt. % with no silver, at least 3% tin, antimony, and at least 2% bismuth). *See* Master, paragraph [0035]. Thus, Master teaches away from using silver when less than 80% of lead is used, and it would not be obvious to one of ordinary skill in the art to try the range of lead claimed by the Applicant because such would not always include the use of at least 3% tin, as taught by Master, nor would it be accompanied by the use of bismuth without silver.

In conclusion, the ranges of elements claimed by the Applicant do not overlap those taught by Master. Further, it would not be obvious to modify Master to include the ranges claimed by the Applicant because Master teaches away from the claimed compositions.

Therefore, it is believed that each of the rejected claims now includes limitations which are not anticipated nor rendered obvious by the cited references, independent claims 1, 12, and 40 should now be in condition for allowance. In addition, it is respectfully noted that any claim depending from a nonobvious independent claim is also nonobvious. *See* M.P.E.P. § 2143.03. Thus, dependent claims 4-5, 14-17, and 41-43 should also be in condition for allowance. Reconsideration and withdrawal of the rejection of claims 1, 4-5, 12, 14-17, and 40-43 under 35 U.S.C. § 103(a) is therefore respectfully requested.

In addition, since withdrawn independent claims 6 and 9 have also been amended to recite "a lead finish comprising from about 78% to less than 80% by weight of lead, between about 9% and about 11% by weight of antimony, greater than 5% up to about 12% by weight of silver, and a balance of tin", it is respectfully requested that claims 6 and 9 in this Application be rejoined, along with their dependent claims 7-8 and 10-11, since all of these claims should also be in condition for allowance.

CONCLUSION

The Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone the undersigned at (210) 308-5677 to facilitate prosecution of this Application. If necessary, please charge any additional fees or deficiencies, or credit any overpayments to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 3rd day of June, 2009.

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